**EDUP EP-9651GS Pro**

# EDUP EP-9651GS Pro PCIe WiFi 6E Card Instruction Manual

## 1. PRODUCT OVERVIEW

The EDUP EP-9651GS Pro is a PCIe WiFi 6E Card designed to provide high-speed wireless connectivity and Bluetooth 5.2 capabilities for desktop PCs. Featuring the Intel AX210NGW chip, it supports Windows 10/11 64-bit operating systems. This tri-band card operates on 6GHz, 5.8GHz, and 2.4GHz frequencies, offering speeds up to 5400Mbps. It incorporates OFDMA and AX MU-MIMO technologies for enhanced network efficiency and includes a heat sink for stable performance.



Image: The EDUP EP-9651GS Pro PCIe WiFi 6E Card, showcasing its design with external antennas and heat sink.

## 2. PACKAGE CONTENTS

Verify that all items listed below are included in your package:

- 1x AX5400M PCIe WiFi Card

- 1x Magnetic antenna base with 3.94 ft cable
- 2x 6dBi Antennas
- 1x USB Bluetooth Cable
- 1x Low-profile bracket
- 1x Screwdriver
- 2x Screws
- 1x CD disc (Included driver)



Image: All components included in the EDUP EP-9651GS Pro retail package.

## 3. INSTALLATION GUIDE

Follow these steps to install your EDUP EP-9651GS Pro PCIe WiFi 6E Card:

1. **Power Off and Open PC:** Shut down your computer completely and unplug the power cord. Open the computer case.

2. **Locate PCIe Slot:** Find an available PCIe x1 slot on your motherboard. If necessary, remove the metal bracket cover from the PC case.

3. **Install WiFi Card:** Carefully insert the EDUP PCIe WiFi card into the chosen PCIe slot until it is firmly seated. Secure it with a screw.

4. **Connect Bluetooth Cable:** Connect one end of the provided USB Bluetooth cable to the 9-pin USB header on the WiFi card and the other end to an available 9-pin USB header on your motherboard. This connection is essential for Bluetooth functionality.



Image: Visual guide for connecting the Bluetooth cable to the motherboard.

5. **Connect Antennas:** Attach the two 6dBi antennas to the magnetic antenna base. Then, connect the antenna cable from the base to the two antenna ports on the back of the installed WiFi card.

6. **Position Antenna Base:** Place the magnetic antenna base in a location that provides optimal signal reception. The magnetic base allows for flexible placement on metal surfaces, such as the top or side of your PC case.
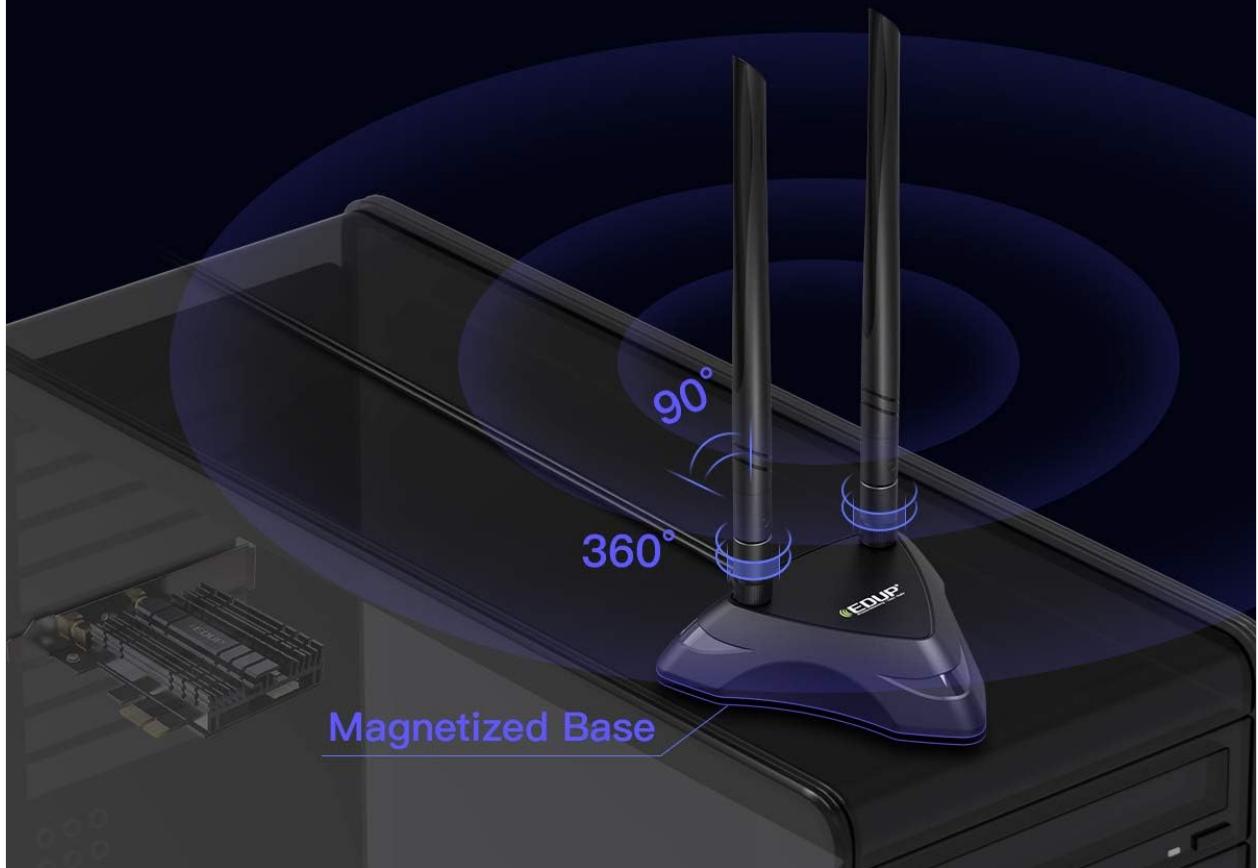
Image: The magnetic antenna base positioned for optimal signal reception.

7. **Close PC and Power On:** Close your computer case, plug in the power cord, and power on your PC.

8. **Install Drivers:** Once Windows starts, you may need to install the drivers. You can use the provided CD or download the latest drivers from the EDUP website or Intel's official website.

## 4. OPERATING INSTRUCTIONS

### 4.1 WiFi 6E Connectivity

The EDUP EP-9651GS Pro supports the latest WiFi 6E standard, offering enhanced performance:

- **Tri-Band Operation:** Connects to 6GHz, 5.8GHz, and 2.4GHz networks for flexible and high-speed connections.
- **High Speeds:** Achieves speeds up to 2400Mbps on 6GHz and 5.8GHz bands, and up to 600Mbps on the 2.4GHz band, totaling 5400Mbps.
- **OFDMA and AX MU-MIMO:** These technologies improve network efficiency, allowing more devices to connect simultaneously with reduced latency.
- **160MHz Broadband Channel:** Supports wider channels for increased data throughput and reduced

congestion in busy network environments.



Image: Illustration of improved data transmission rates with WiFi 6 technology.



# Latest Wi-Fi 6 Technology

- OFDMA
- BSS color
- 1024-QAM
- 3X speed & 4X throughput

Image: Key features of the latest Wi-Fi 6 technology supported by the card.

## 4.2 Bluetooth 5.2 Functionality

The card integrates Bluetooth 5.2, offering enhanced range and faster data transfer for connecting peripherals:

- **Extended Range:** Provides a 4x expanded Bluetooth signal range compared to older versions.
- **Fast File Transfer:** Facilitates quicker transfer of large files.

- **Device Connectivity:** Connects seamlessly with various Bluetooth devices such as mice, keyboards, headphones, and game controllers.

## 5. MAINTENANCE

To ensure optimal performance and longevity of your EDUP EP-9651GS Pro card:

- **Driver Updates:** Regularly check for and install the latest WiFi and Bluetooth drivers from the EDUP support website or Intel's official website. Updated drivers can improve performance, stability, and security.
- **Heat Management:** The card features a high-quality aluminum alloy heat sink to dissipate heat effectively, maintaining stable operation even under heavy load. Ensure good airflow within your PC case to aid in cooling.
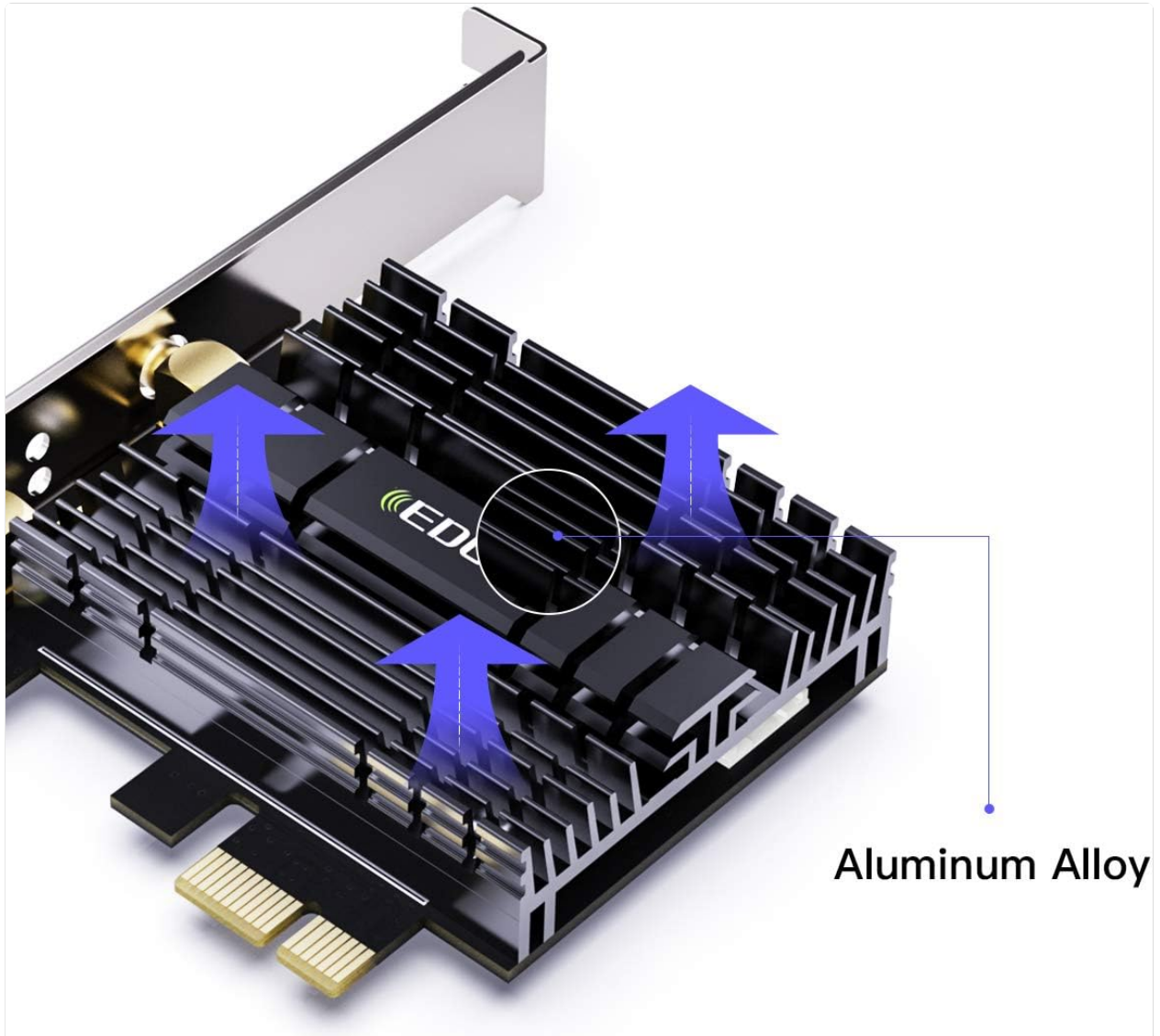


Image: The aluminum alloy heat sink designed for efficient thermal management.

- **Antenna Placement:** Periodically check the position of your antenna base to ensure it remains in an optimal location for signal reception. Avoid obstructions.

## 6. TROUBLESHOOTING

If you encounter issues with your EDUP EP-9651GS Pro card, refer to the following common solutions:

- **No WiFi Connection:**

- Ensure the card is properly seated in the PCIe slot.
- Verify that the antennas are securely connected to the card and the base is positioned correctly.
- Check Device Manager in Windows to see if the WiFi adapter is recognized and enabled. Reinstall drivers if necessary.

- **Bluetooth Not Working:**

  - Confirm that the USB Bluetooth cable is correctly connected to both the WiFi card and a 9-pin USB header on your motherboard. This is a common cause for Bluetooth issues.
  - Check Device Manager for Bluetooth devices and reinstall drivers if needed.

- **Slow WiFi Speeds or Frequent Disconnections:**

  - Adjust the position of the magnetic antenna base to improve signal strength.
  - Ensure your router supports WiFi 6E and is configured for optimal performance.
  - Update your WiFi drivers to the latest version.
  - Check for interference from other electronic devices.

- **Card Not Detected by Windows:**

  - Reseat the card in the PCIe slot. Try a different PCIe slot if available.
  - Ensure your operating system is Windows 10 or Windows 11 (64-bit).
  - Check your motherboard's BIOS/UEFI settings to ensure the PCIe slot is enabled.

## 7. TECHNICAL SPECIFICATIONS

| Brand | EDUP |
| --- | --- |
| Model Number | EP-9651GS Pro |
| Chipset | Intel AX210NGW |
| Wireless Standard | IEEE 802.11ax/ac/b/g/n (WiFi 6E) |
| Frequency Bands | 2.4GHz, 5.8GHz, 6GHz (Tri-Band) |
| Max WiFi Speed | Up to 5400Mbps (2.4GHz: 600Mbps, 5.8GHz: 2400Mbps, 6GHz: 2400Mbps) |
| Bluetooth Version | Bluetooth 5.2 |
| Interface | PCIe x1 |
| Antennas | 2x 6dBi High-Gain External Antennas with Magnetic Base |
| Operating System Support | Windows 10 (64-bit), Windows 11 (64-bit) |
| Dimensions (Card) | Approx. 11.81 x 5.51 x 2.17 inches (Product Dimensions from data) |
| Item Weight | 15.2 ounces |
| UPC | 793420184565 |

## 8. SUPPORT AND WARRANTY

For driver downloads, product support, and further information, please visit the official EDUP website:

**EDUP Driver Download & Support Page**

For warranty information, please refer to the documentation included with your purchase or contact EDUP customer service directly.